

# Notice of Allowability

Application No.

09/538,351

Examiner

David E. England

Applicant(s)

GUO ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/16/2007.
2. ☒ The allowed claim(s) is/are 1, 5 - 8 and 33 - 35.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☒ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 07/11/2007.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**

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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Eamon J. Wall Reg. No. 39414 on July 11, 2007, See Interview Summary.

The application has been amended as follows:

3. Claim 5. (Currently Amended) A method for caching streaming multimedia (SM), comprising:
  - calculating a helper hotness rating at a helper server (HS) for each of a plurality of SM objects that are hosted at a content server connected to the HS in a network, each helper hotness rating being a total number of client requests for a particular SM object divided, by a time period during which the client requests are received;
  - categorizing each SM object into one of a plurality of helper hotness categories based on the calculated helper hotness rating; and
  - pulling a fraction of the SM ~~objects~~ object by the HS from the content server, said fraction being determined according to the helper hotness category, the HS caching the fractions of each SM object for distribution to a plurality of clients, the HS being interposed between the content server and the clients.

7. Claims 14 – 30 (Cancelled)

8. Claims 1, 5 – 8 and 33 – 35 are allowed.

9. The following is an examiner's statement of reasons for allowance:

10. the closest prior art of record (Eyal 6484199 and Hunter et al. 6647417) does not teach nor suggest, "caching streaming multimedia (SM), by calculating a helper hotness rating at a helper server (HS) for each of a plurality of SM objects that are hosted at a content server connected to the HS in a network, each helper hotness rating being a total number of client requests for a particular SM object divided, by a time period during which the client requests are received; categorizing each SM object into one of a plurality of helper hotness categories based on the calculated helper hotness rating; and pulling a fraction of the SM object by the HS from the content server, said fraction being determined according to the helper hotness category, the HS caching the fractions of each SM object for distribution to a plurality of clients, the HS being interposed between the content server and the clients", as taught by the Applicant, (see Specification as of 03/29/2000, pages 14 – 32; and Drawings dated 03/29/2000, Figures 2 and 3b – 5b of Applicant's enabling portions of the specification and drawings).

11. Eyal and Hunter do not teach nor suggest in detail a plurality of Helper Servers that "pull" a fraction of a streaming media object for a central server and cache the fraction of the streaming media object on one of the Helper Servers (HS). Before the caching occurs, a fraction is determined by how popular a streaming media object is at a length of time, something similar

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to a top 20-song list. The more popular the streaming media object and the more hits a streaming media object receives the longer the length of the fraction will be, also known in the Application as Hotness Rating. Eyal and Hunter teach caching streaming media objects and allowing users to vote on which streaming media objects they would like to listen to more but the prior art lacks the caching algorithm and Hotness Rating in the context of “pulling” that the Applicant’s invention clearly teaches, (see Specification as of 03/29/2000, pages 18 – 32; and Drawings dated 03/29/2000, Figures 2 and 3b – 5b of Applicant’s enabling portions of the specification and drawings).

12. The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claim as well as for the further limitations set forth. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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